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(FILE 'HOME' ENTERED AT 07:55:03 ON 28 DEC 2000)

INDEX 'IMOBILITY, 2MOBILITY, ADISALERTS, AEROSPACE, AGRICOLA, ALUMINIUM,
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BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO,
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ON 28 DEC 2000

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8 FILE APIPAT2
7 FILE AQUASCI
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6 FILE BIOBUSINESS

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 645 FILE TOXLINE
 16 FILE TOXLIT
 1 FILE TRIBO
 1 FILE TULSA
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 3 FILE ULIDAT
 19647 FILE USPATFULL
 344 FILE WPIDS
 344 FILE WPINDEX

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NTIS, JICST-EPLUS, DGE, ESBIODBASE, BIOTECHNO, AGRIC, LIFESCI,
PATOSEP, BIOTECHDS, LIT, NIOSHTIC, TOXLIT, ...' ENDED AT 08:03:32

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chip# or biochip#) and (DNA or RNA or nucleic or oligonucleotide# or oligo#
or probe# or protein# or polypeptide# or peptide#)

3 FILES SEARCHED...

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20 FILES SEARCHED...

25 FILES SEARCHED...

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L4 78 DUP REM L3 (37 DUPLICATES REMOVED)

=> d 1-78 ti

L4 ANSWER 1 OF 78 PROMT COPYRIGHT 2000 Gale Group

TI Nanobots Examine **DNA** for Mismatches.(Brief Article)

L4 ANSWER 2 OF 78 PROMT COPYRIGHT 2000 Gale Group

TI IBM ace has nanotech memory in mind.(Company Operations)

L4 ANSWER 3 OF 78 PROMT COPYRIGHT 2000 Gale Group

TI A **CHIP** off the old BLOCK?(Company Business and Marketing)

L4 ANSWER 4 OF 78 PROMT COPYRIGHT 2000 Gale Group

TI IBM And University Researchers Uncover New Biomechanical Phenomenon Using
Tiny Silicon ``Fingers''; ``Micromachines'' Could Lead to New Medical
Treatments, Nano-robots.

L4 ANSWER 5 OF 78 IFIPAT COPYRIGHT 2000 IFI DUPLICATE 2

TI METHOD OF BINDING A PLURALITY OF CHEMICALS ON A SUBSTRATE BY
ELECTROPHORETIC SELF-ASSEMBLY; ADHESION OF SUBSTANCES TO THE SURFACE OF
WALLS IN A CHANNEL; INSERTION OF SUBSTANCES WITH DIFFERENT MIGRATION
RATES INTO A SOLUTION IN A CHANNEL, APPLYING AN ELECTRICAL CURRENT,
BINDING A SUBSTANCES TO THE WALLS OF THE CHANNEL

L4 ANSWER 6 OF 78 IFIPAT COPYRIGHT 2000 IFI DUPLICATE 3

TI COVALENT ATTACHMENT OF **NUCLEIC** ACID MOLECULES ONTO SOLID-PHASES
VIA DISULFIDE BONDS; COVALENT, SPECIFIC AND REVERSIBLE IMMOBILIZATION OF

3' OR 5'SULFHYDRYL OR DISULFIDE MODIFIED **NUCLEIC ACID MOLECULES**
ONTO SOLID-PHASES BY MEANS OF A REVERSIBLE DISULFIDE BOND FOR
NUCLEIC ACID MOLECULE ARRAY PREPARATION; EFFICIENCY

- L4 ANSWER 7 OF 78 IFIPAT COPYRIGHT 2000 IFI
TI METHOD OF GENERATING **NUCLEIC ACID OLIGOMERS** OF KNOWN
COMPOSITION
- L4 ANSWER 8 OF 78 IFIPAT COPYRIGHT 2000 IFI
TI ANALYING POLYNUCLEOTIDE SEQUENCES; PATTERNING OF **OLIGONUCLEOTIDES**
ON SURFACE OF SUPPORT; ATTACHING **OLIGONUCLEOTIDES** TO IMPERVIOUS
SURFACE AT KNOWN LOCATIONS WITH COMPUTER CONTROLLED APPARATUS
- L4 ANSWER 9 OF 78 IFIPAT COPYRIGHT 2000 IFI
TI CHEMICALLY MODIFIED **NUCLEIC ACIDS** AND METHODS FOR COUPLING
NUCLEIC ACIDS TO SOLID SUPPORT; **NUCLEIC ACID** MODIFIED
BY ADDITION OF EPOXIDE-ALKOXY-SILANE COMPOUND FOR IMMOBILIZATION TO
UNMODIFIED OR UNDERIVATIZED GLASS SURFACE; FOR **HYBRIDIZATION**
MICROARRAYS FOR GENOME-WIDE GENETIC MAPPING AND GENE EXPRESSION STUDIES
- L4 ANSWER 10 OF 78 IFIPAT COPYRIGHT 2000 IFI
TI MULTI PARAMETER SCANNER
- L4 ANSWER 11 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI Porous substrate for polymer synthesis, useful e.g. for producing
high-density **arrays** of **nucleic acids**, comprises porous
surface region of silica on a support.
- L4 ANSWER 12 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI Apparatus for monitoring many different molecular interactions, such as
immunoglobulin/antigen interaction and **DNA hybridization**
, comprises a reaction chamber and a fluid inflow channel communicating
with the reaction chamber.
- L4 ANSWER 13 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI Electromagnetic **biochip** useful for actively controlling chemical
and biochemical reactions e.g. in **DNA hybridization**
studies or drug screening, has an **array** of individually
addressable micro-electromagnetic units.
- L4 ANSWER 14 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI Nucleotide base sequencing method is used for direct **nucleic**
acid sequencing with a polymerase, **nucleic acid** sample, primers
and four different labeled nucleotides, without the need for
amplification.
- L4 ANSWER 15 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI **Chip** for analyzing **nucleic acid** accumulation, useful
for monitoring e.g. diagnostic amplification reactions, comprises optical
waveguide with microcavity containing immobilized **oligonucleotide**
.
- L4 ANSWER 16 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
TI Structure with **nanometer**-scale organization, useful as
arrays for performing **hybridization** assays, contains
highly ordered polymers fixed at at least two points.
- L4 ANSWER 17 OF 78 TOXLINE DUPLICATE 4
TI The BARC biosensor applied to the detection of biological warfare
agents.
- L4 ANSWER 18 OF 78 CAPLUS COPYRIGHT 2000 ACS
TI Effect of **DNA probe** structure and target length on
hybridization kinetics and efficiency of **DNA**
self-assembled monolayers.

L4 ANSWER 19 OF 78 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 5
 TI Active microelectronic **chip** devices which utilize controlled electrophoretic fields for multiplex **DNA hybridization** and other genomic applications

L4 ANSWER 20 OF 78 INSPEC COPYRIGHT 2000 IEE
 TI Microelectronic **arrays** and electric field assisted self-assembly of component structures for micro/nanofabrication applications.

L4 ANSWER 21 OF 78 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 6
 TI Molecular beacons for **DNA** biosensors with **micrometer** to submicrometer dimensions

L4 ANSWER 22 OF 78 CEN COPYRIGHT 2000 ACS
 TI CHEMISTS AT THE CUTTING EDGE
 Frontiers of Chemistry Symposium brings together more than 70 leading young German and U.S. chemists

L4 ANSWER 23 OF 78 PROMT COPYRIGHT 2000 Gale Group
 TI Nanogen Advances SNP Identification Technology - Joint Study with NCI published in Nature Biotechnology -.

L4 ANSWER 24 OF 78 PROMT COPYRIGHT 2000 Gale Group
 TI Genomics-Based Diagnostics Add a New Level to Drug Development.

L4 ANSWER 25 OF 78 COPYRIGHT 2000 Gale Group
 TI Immunology Technology Advanced.

L4 ANSWER 26 OF 78 COPYRIGHT 2000 Gale Group
 TI SYNTHETIC MICROSPONGE JOINS GENE-THERAPY ROSTER.

L4 ANSWER 27 OF 78 IFIPAT COPYRIGHT 2000 IFI
 TI INTEGRATED **NUCLEIC** ACID DIAGNOSTIC DEVICE

L4 ANSWER 28 OF 78 IFIPAT COPYRIGHT 2000 IFI
 TI VERY LARGE SCALE IMMOBILIZED POLYMER SYNTHESIS USING MECHANICALLY DIRECTED FLOW PATHS; FLOWING A PROTECTED NUCLEOTIDE THROUGH FLOW CHANNELS
 AND COVALENTLY COUPLING IT TO THE SUBSTRATE SURFACE; DEPROTECTING AND FLOWING SELECTED NUCLEOTIDES TO REACT WITH THE FIRST; HIGH SPEED; ROTATION

L4 ANSWER 29 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 TI Production of **arrays**, such as analyte binding **arrays**.

L4 ANSWER 30 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R) DUPLICATE 7
 TI Electrospray deposition as a method for mass fabrication of mono- and multicomponent microarrays of biological and biologically active substances

L4 ANSWER 31 OF 78 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 8
 TI Discrimination of **DNA hybridization** using chemical force microscopy

L4 ANSWER 32 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R)
 TI **Nucleic** acid detection technologies - Labels, strategies, and formats

L4 ANSWER 33 OF 78 INSPEC COPYRIGHT 2000 FIZ KARLSRUHE
 TI Progress in "engineering up" nanotechnology devices utilizing **DNA** as a construction material.

L4 ANSWER 34 OF 78 INS COPYRIGHT 2000 IEE DUPLICATE 9
TI Overview of the DPAD Detector for **protein** crystallography.

L4 ANSWER 35 OF 78 COPYRIGHT 2000 Gale Group DUPLICATE 10
TI Biosensors and Diagnostics: It Ain't Over Till It's Over.

L4 ANSWER 36 OF 78 PROMT COPYRIGHT 2000 Gale Group
TI NANO-SIZE SEMICONDUCTORS LABEL CELLS, **DNA** COLOR-CODING QUANTUM
DOTS DEBUT WITH PROMISING CAREERS IN CLINICAL DIAGNOSTICS FIELD.

L4 ANSWER 37 OF 78 PROMT COPYRIGHT 2000 Gale Group
TI NANO-SIZE SEMICONDUCTORS LABEL CELLS, **DNA** COLOR-CODING QUANTUM
DOTS DEBUT WITH PROMISING CAREERS IN CLINICAL DIAGNOSTICS FIELD By David
N. Leff Science Editor

L4 ANSWER 38 OF 78 PROMT COPYRIGHT 2000 Gale Group
TI Executive Briefing

L4 ANSWER 39 OF 78 PROMT COPYRIGHT 2000 Gale Group
TI Also From Oak Ridge 1998: From Mass Spec to NMR

L4 ANSWER 40 OF 78 PROMT COPYRIGHT 2000 Gale Group
TI Oak Ridge 1998: Big Issues on Small Sizes

L4 ANSWER 41 OF 78 COPYRIGHT 2000 Gale Group
TI NANO-SIZE SEMICONDUCTORS LABEL CELLS, **DNA** COLOR-CODING QUANTUM
DOTS DEBUT WITH PROMISING CAREERS IN CLINICAL DIAGNOSTICS FIELD.

L4 ANSWER 42 OF 78 COPYRIGHT 2000 Gale Group
TI NANO-SIZE SEMICONDUCTORS LABEL CELLS, **DNA** COLOR-CODING QUANTUM
DOTS DEBUT WITH PROMISING CAREERS IN CLINICAL DIAGNOSTICS FIELD By David
N. Leff Science Editor

L4 ANSWER 43 OF 78 COPYRIGHT 2000 Gale Group
TI PIN-LOADED **CHIP** PINPOINTED SEQUENCE MASS SPECTROMETRY DETECTED
CANCER-CAUSING MUTATIONS IN P53 BY WEIGHT, NOT SIZE By David N. Leff
Science Editor

L4 ANSWER 44 OF 78 COPYRIGHT 2000 Gale Group
TI Multiplexing Unleashed: Luminex Reinvents "Flow"

L4 ANSWER 45 OF 78 COPYRIGHT 2000 Gale Group
TI Is Mass Spectrometry Ready for Clinical Testing?

L4 ANSWER 46 OF 78 COPYRIGHT 2000 Gale Group
TI Collaborations Multiply, Many Focused on Drug Discovery

L4 ANSWER 47 OF 78 COPYRIGHT 2000 Gale Group
TI Executive Briefing

L4 ANSWER 48 OF 78 COPYRIGHT 2000 Gale Group

TI Also From Oak Ridge 1998: From Mass Spec to NMR

L4 ANSWER 49 OF 78 COPYRIGHT 2000 Gale Group

TI Oak Ridge 1998: Big Issues on Small Sizes

L4 ANSWER 50 OF 78 COPYRIGHT 2000 PJB

TI Small is beautiful as scientists analyse a single drop of blood

L4 ANSWER 51 OF 78 IFIPAT COPYRIGHT 2000 IFI

TI MICROFABRICATED, FLOWTHROUGH POROUS APPARATUS FOR DISCRETE DETECTION OF BINDING REACTIONS

L4 ANSWER 52 OF 78 IFIPAT COPYRIGHT 2000 IFI

TI COVALENT ATTACHMENT OF **NUCLEIC** ACID MOLECULES ONTO SOLID-PHASES VIA DISULFIDE BONDS; IMMOBILIZING **NUCLEIC** ACID MOLECULES TO SOLID-PHASES

L4 ANSWER 53 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

TI Deposition of compounds on solid substrates - by electrospraying a solution of a non-volatile biologically functional or biologically active substances on a surface of the substrate.

L4 ANSWER 54 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R)

TI Miniaturization of analytical systems

L4 ANSWER 55 OF 78 AGRICOLA

TI Molecular cloning and functional heterologous expression of two alleles encoding (S)-N-methylcoclaurine 3'-hydroxylase (CYP80B1), a new methyl jasmonate-inducible cytochrome P-450-dependent mono-oxygenase of benzyloquinoline alkaloid biosynthesis.

L4 ANSWER 56 OF 78 COPYRIGHT 2000 Gale Group

TI -HEWLETT-PACKARD: HP introduces GeneArray Scanner for GeneChip **probe arrays** from Affymetrix

L4 ANSWER 57 OF 78 COPYRIGHT 2000 Gale Group

TI Cost factors changing the role of the laboratory in care system

L4 ANSWER 58 OF 78 COPYRIGHT 2000 Gale Group

TI New Products and Problems Spur Microbiology Growth

L4 ANSWER 59 OF 78 DKILIT COPYRIGHT 2000 DKI

TI The application of photolithographic techniques for the fabrication of high density **oligonucleotide arrays**

L4 ANSWER 60 OF 78 IFIPAT COPYRIGHT 2000 IFI

TI APPARATUS AND METHOD FOR ANALYZING POLYNUCLEOTIDE SEQUENCES AND METHOD OF GENERATING **OLIGONUCLEOTIDE ARRAYS**; REPEATEDLY COUPLING NUCLEOTIDE PRECURSORS TO SETS OF CELL LOCATIONS ON SUPPORT

L4 ANSWER 61 OF 78 IFIPAT COPYRIGHT 2000 IFI

TI HIGH EFFICIENCY METHOD FOR ISOLATING TARGET SUBSTANCES USING A MULTISAMPLE SEPARATION DEVICE; COLLECTING TARGET SUBSTANCE BY FORMING A COMPLEX WITH A SECOND SUBSTANCE

L4 ANSWER 62 OF 78 IFIPAT COPYRIGHT 2000 IFI

TI ACTIVE PROGRAMMABLE ELECTRONIC DEVICES FOR MOLECULAR BIOLOGICAL ANALYSIS AND DIAGNOSTICS; USED TO CARRY OUT AND CONTROL MULTISTEP, MULTIPLEX REACTIONS SUCH AS, **NUCLEIC ACID HYBRIDIZATION**, ANTIBODY/ANTIGEN REACTIONS, BIOPOLYMER SYNTHESIS

L4 ANSWER 63 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R)
 TI Ellipsometric and interferometric characterization of **DNA probes** immobilized on a combinatorial **array**

L4 ANSWER 64 OF 78 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 TI **DNA** as a material for nanotechnology;
DNA chip, biochip and biosensor construction

L4 ANSWER 65 OF 78 COPYRIGHT 2000 Gale Group
 TI Firms Pursue Microfabrication

L4 ANSWER 66 OF 78 COPYRIGHT 2000 Gale Group
 TI New technologies advance clinical testing, both in the laboratory and at the bedside

L4 ANSWER 67 OF 78 COPYRIGHT 2000 Gale Group
 TI NANOSCALE EXPERIMENT PRESAGES MOLECULE-SIZE SENSORS, ELECTRONIC COMPONENTS
 _ SOME DAY

L4 ANSWER 68 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R)
 TI FABRICATION OF PATTERNED **DNA** SURFACES

L4 ANSWER 69 OF 78 COMPENDEX COPYRIGHT 2000 EI
 TI Fluorescence detection applied to nonelectrophoretic **DNA** diagnostics on **oligonucleotide arrays**.

L4 ANSWER 70 OF 78 COPYRIGHT 2000 Gale Group
 TI 'Blockbuster' therapies' outlook unclear

L4 ANSWER 71 OF 78 AGRICOLA
 TI Particles resembling circovirus in the bursa of fabricius of pigeons.

L4 ANSWER 72 OF 78 ENERGY COPYRIGHT 2000 USDOE/IEA-ETDE
 TI Sequencing by hybridization with oligonucleotide matrix.

L4 ANSWER 73 OF 78 CEN COPYRIGHT 2000 ACS
 TI Fullerenes Broaden Scientists' View of Molecular Structure
 Fullerene structure of atoms bonded in a cage also occurs in nanotubes, graphite 'onions,' and metallocarbohedrenes

L4 ANSWER 74 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
 TI **DNA** sequencing method - based on temp.-dependent dissociation of **DNA-probe** duplex(es).

L4 ANSWER 75 OF 78 AGRICOLA
 TI A method for **DNA** sequencing by **hybridization** with **oligonucleotide** matrix.

L4 ANSWER 76 OF 78 INVESTEXT COPYRIGHT 2000 TFS
 TI Affymetrix - Company Report

L4 ANSWER 77 OF 78 DGENE COPYRIGHT 2000 DERWENT INFORMATION LTD
 TI Self-addressable and self-assembling system for biological reactions - comprises **array** of specific binding regions on **biochip**, also new fluorescence detection system and stringency control device

L4 ANSWER 78 OF 78 DGENE COPYRIGHT 2000 DERWENT INFORMATION LTD

TI Self-addressable and self-assembling system for biological reactions - comprises **array** of specific binding regions on **biochip**, also new fluorescence detection system and stringency control device.

=> d 68 bib ab

L4 ANSWER 68 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R)
AN 96:606962 SCISEARCH
GA The Genuine Article (R) Number: VB832
TI FABRICATION OF PATTERNED **DNA** SURFACES
AU CHRISEY L A (Reprint); OFERRALL C E; SPARGO B J; DULCEY C S; CALVERT J M
CS USN, RES LAB, CODE 6900, WASHINGTON, DC, 20375 (Reprint); GEOCENTERS INC, FT WASHINGTON, MD, 20744
CYA USA
SO NUCLEIC ACIDS RESEARCH, (01 AUG 1996) Vol. 24, No. 15, pp. 3040-3047. ISSN: 0305-1048.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 30
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Two photolithographic methods are described for the formation of patterned single or multiple **DNA** species on SiO₂ substrates. In the first approach, substrates are treated with a photochemically labile organosilane monolayer film. Irradiation of these surfaces with patterned deep UV (193 nm) light results in patterned chemically reactive groups which are then reacted with heterobifunctional crosslinking molecules. Covalent attachment of modified synthetic **DNA** oligomers to the crosslinker results in stable **DNA** patterns. Alternatively, a photoresist is spin-coated over a silane film which had been previously modified with the hetero-bifunctional crosslinker. Upon patterned irradiation and subsequent development, the underlying cross-linker-modified layer is revealed, and is then reacted with a chemically modified **DNA**. Feature dimensions to 1 **micron** are observed when a single fluorescent **DNA** is attached to the surface. By performing sequential exposures, we have successfully immobilized two distinguishable **DNA** oligomers on a single surface. Synthetic **DNA** immobilized in this manner retains the ability to **hybridize** to its complementary strand, suggesting that these approaches may find utility in the development of miniaturized **DNA**-based biosensors.

=> d 59, 63,64 bib ab

L4 ANSWER 59 OF 78 DKILIT COPYRIGHT 2000 DKI
AN 1998:9619 DKILIT
TI The application of photolithographic techniques for the fabrication of high density **oligonucleotide arrays**
AU Beecher, J.E.; McGall, G.H.; Goldberg, M.J.
SO Polym. Mater. Sci. Eng. (1997) 77, p.394-395, 2p,5f,181
CODEN: PMSEGD ISSN: 0743-0515
DT Conference
LA English
AB The merging of lithographic techniques and combinatorial chemistry has led to the development of oligonucleotide **arrays** for **hybridization** based sequence analysis. while fabrication of the **arrays** is efficiently accomplished using a direct photolysis approach, higher contrast methods are needed to achieve smaller feature sizes. To accomplish this the authors have developed a chemically amplified photo process employing a photoacid generator, an enhancer and an acid labile protecting group. The process can be used to synthesize **oligonucleotides** in yields approaching those attained with

traditional **oligonucleotide** chemistry and with features at least as small as 2 **nanometer**, if not smaller (author abstract).

L4 ANSWER 63 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R)
AN 97:395019 SCISEARCH
GA The Genuine Article (R) Number: WZ447
TI Ellipsometric and interferometric characterization of **DNA probes** immobilized on a combinatorial **array**
AU Gray D E (Reprint); CaseGreen S C; Fell T S; Dobson P J; Southern E M
CS UNIV OXFORD, DEPT ENGN SCI, PARKS RD, OXFORD OX1 3PJ, ENGLAND (Reprint);
UNIV OXFORD, DEPT BIOCHEM, OXFORD OX1 3QU, ENGLAND
CYA ENGLAND
SO LANGMUIR, (14 MAY 1997) Vol. 13, No. 10, pp. 2833-2842.
Publisher: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036.
ISSN: 0743-7463.
DT Article; Journal
FS PHYS
LA English
REC Reference Count: 30
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB We have used ellipsometry to study **oligonucleotides** bound on an **array** by observing changes in the optical thickness of the organic material attached to the surface. Interferometry has been used as a complementary technique to confirm our ellipsometry measurements. We have used these optical methods to characterize the chemical steps involved in synthesizing **oligonucleotides** on a solid support. Large area **arrays** have been mapped by ellipsometry with a spatial resolution of similar to 1 mm(2) and a sub-**nanometer** optical thickness resolution. We have demonstrated that this method can differentiate between areas containing **oligonucleotides** of different lengths.

L4 ANSWER 64 OF 78 BIOTECHDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1997-05370 BIOTECHDS
TI **DNA** as a material for nanotechnology;
DNA chip, biochip and biosensor construction
AU Niemeyer C M
CS Univ.Bremen
LO Universitaet Bremen, FB2-UFT, Biotechnologie und Molekulare Genetik, Leobener Strasse, D-28359 Bremen, Germany.
Email: cmn@biotec.uni.
SO Angew.Chem.Int.Ed.Engl.; (1997) 36, 6, 585-87
CODEN: ACIEAY ISSN: 0570-0833
DT Journal
LA English
AB Nanotechnology is the new term describing recent research devoted to formation of **nanometer**-scale structural and functional elements. Because further reduction of the microsystems by engineering down (e.g. by lithography) is uneconomical, new engineering up strategies are being designed for assembly of small molecular building blocks to give larger devices, preferably by self-assembly. Biological macromolecules, e.g. **proteins** and **nucleic acids**, are being used as components for the construction of nanostructured systems. **DNA** displays a large variety of structures and high physicochemical stability and mechanical rigidity and may be especially suited to e.g. **DNA chip** construction to attain circuit sizes below 100 nm. **DNA** networks may be formed on a solid surface using **oligonucleotides** as initiation points for enzymatic **DNA** synthesis or **hybridization**. The networks may be used as scaffolds for deposition of conducting materials e.g. gallium arsenide or indium phosphite by chemical vapor deposition. **DNA** may be used in electrical, optical, catalytic and numeric device construction. (56 ref)

=> d 29, 32, 52 bib ab

L4 ANSWER 29 OF 78 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
AN 1999-288012 [24] WPIDS
CR 2000-339762 [29]
DNN N1999-215072 DNC C1999-085130
TI Production of **arrays**, such as analyte binding **arrays**.
DC A31 A96 B04 D16 J04 S03
IN MILLSTEIN, L S
PA (MILL-I) MILLSTEIN L S
CYC 82
PI WO 9919711 A1 19990422 (199927)* EN 59p
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG
MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG
US UZ VN YU ZW

AU 9898062 A 19990503 (199937)
ADT WO 9919711 A1 WO 1998-US21860 19981016; AU 9898062 A AU 1998-98062
19981016

FDT AU 9898062 A Based on WO 9919711

PRAI US 1997-62203 19971016

AB WO 9919711 A UPAB: 20000617

NOVELTY - Method of making **arrays** comprising **array**
members which are formed into bundle members and are further formed into

a

bundle in which the **array** members are aligned, is new. The
bundle is sectioned to produce wafers that consists of an **array**
of the **array** members.

DETAILED DESCRIPTION - The method for making **arrays**
comprises:

- (a) providing **array** members;
- (b) forming bundle members comprising the **array** members;
- (c) assembling the bundle members to form a bundle in which the
array members are aligned; and
- (d) sectioning the bundle to produce wafers that comprise an
array of the **array** members.

An INDEPENDENT CLAIM relates to a method of making replica
arrays by repeatedly cross-sectioning aligned **array**
members to produce sections with at least one surface that exposes
array members in the same disposition to replicate the
array.

USE - The **array** may be used to carry out an immunoassay,
hybridization assay, ligand-binding assay, receptor-binding assay,
or a substrate analog affinity assay. The device may be used to analyze
chemical, biological, veterinary, clinical, medical, forensic,
agricultural, environmental, food, consumer, industrial or military
samples.

ADVANTAGE - Identical **arrays** are produced efficiently and
economically.

DESCRIPTION OF DRAWING(S) - The figure shows the production of
wafers
from a bundle.
Dwg.4/7

L4 ANSWER 32 OF 78 SCISEARCH COPYRIGHT 2000 ISI (R)
AN 1999:296048 SCISEARCH
GA The Genuine Article (R) Number: 185QG
TI **Nucleic** acid detection technologies - Labels, strategies, and
formats
AU Kricka L J (Reprint)
CS UNIV PENN, DEPT PATHOL & LAB MED, PHILADELPHIA, PA 19104 (Reprint)

CYA USA
 SO CLINICAL CHEMISTRY, (1999) Vol. 45, No. 4, pp. 451-458.
 Publisher: AMER ASSOC CLINICAL CHEMISTRY, 2101 L STREET NW, SUITE 202,
 WASHINGTON, DC 20037-1526.
 ISSN: 0009-9147.
 DT Article; Journal
 FS LIFE
 LA English
 REC Reference Count: 73
 ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
 AB Currently, no consensus exists on assay formats, labels, or detection reactions for **nucleic acid** assays. New labels continue to be developed and tested, and recent candidates include acetate kinase, firefly luciferase, and genes for enzymes. An additional trend is toward nonamplification strategies (e.g., branched chain and dendrimer type assays) as alternatives to the popular PCR and related amplification strategies. The new wave of microanalytical devices (microchips, with nanoliter to microliter internal volumes), massively parallel simultaneous test **arrays**, and the desire to produce hand-held sensors present new challenges and requirements for **nucleic acid** detection methods (e.g., analysis of large **arrays** of **micrometer**-sized spots of **nucleic acid** with high resolution). Here I review selected developments and new directions in **nucleic acid** assays. (C) 1999 American Association for Clinical Chemistry.

L4 ANSWER 52 OF 78 IFIPAT COPYRIGHT 2000 IFI
 AN 3072956 IFIPAT;IFIUDB;IFICDB
 TI COVALENT ATTACHMENT OF **NUCLEIC ACID** MOLECULES ONTO SOLID-PHASES VIA DISULFIDE BONDS; IMMOBILIZING **NUCLEIC ACID** MOLECULES TO SOLID-PHASES
 INF Anderson, Stephen, Princeton, NJ
 Rogers, Yu-Hui, Damascus, MD
 IN Anderson Stephen; Rogers Yu-Hui
 PAF Molecular Tool, Inc., Baltimore, MD
 PA Molecular Tool Inc (38823)
 EXNAM Marschel, Ardin H
 AG Auerbach, Jeffrey
 Howrey & Simon
 McCabe, Kevin W.
 PI US 5837860 19981117
 AI US 1997-812010 19970305
 XPD 5 Mar 2017
 FI US 5837860 19981117
 DT UTILITY; REASSIGNED
 FS CHEMICAL
 MRN 008901 MFN: 0270
 CLMN 27
 GI 2 Drawing Sheet(s), 2 Figure(s).
 AB Methods for the covalent, specific and reversible immobilization of **nucleic acid** molecules onto solid-phases by means of a reversible disulfide bond for **nucleic acid** molecule **array** preparation are described. These methods can be used to prepare reusable **nucleic acid** molecule **arrays** with high specificity and high efficiency.

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(FILE 'HOME' ENTERED AT 07:55:03 ON 28 DEC 2000)

INDEX '1MOBILITY, 2MOBILITY, ADISALERTS, AEROSPACE, AGRICOLA, ALUMINIUM, ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2, AQUASCI, BABS, BIBLIODATA, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, BLLDB, CABA, CANCERLIT, CAPLUS, CBNB, CEABA-VTB, ..' ENTERED AT 07:55:18

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113 FILE AEROSPACE
24 FILE AGRICOLA
2 FILE ALUMINIUM
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1 FILE APILIT
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6 FILE BABS
6 FILE BIOBUSINESS
1 FILE BIOCOMMERCE
110 FILE BIOSIS
19 FILE BIOTECHABS
19 FILE BIOTECHDS
30 FILE BIOTECHNO
872 FILE CANCERLIT
222 FILE CAPLUS
10 FILE CEABA-VTB
80 FILE CEN
6 FILE CIN
103 FILE COMPENDEX
7 FILE COMPUAB
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18 FILE DKILIT
35 FILE DGENE
6 FILE ELCOM
2 FILE EMA
3 FILE EMBAL
78 FILE EMBASE
80 FILE ENERGY
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6012 FILE MEDLINE
5 FILE METADEX
17 FILE NIOSHTIC
388 FILE NLDB
64 FILE NTIS
3 FILE OCEAN
1 FILE PAPERCHEM2
22 FILE PATOSEP
8 FILE PATOSWO
8 FILE PHIN
3 FILE PIRA
1 FILE POLLUAB
778 FILE PROMT
4 FILE RAPRA
178 FILE SCISEARCH
3 FILE SIGLE
7 FILE SOLIDSTATE

1 FILE TEXTILETECH
 645 FILE TOXLINE
 16 FILE TOXLIT
 1 FILE TRIBO
 1 FILE TULSA
 1 FILE UFORDAT
 3 FILE ULIDAT
 19647 FILE USPATFULL
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 344 FILE WPINDEX

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